AMENDMENTS TO THE DRAWINGS

Applicant directs the appended Replacement Sheet submitted herewith into the Specification.

REMARKS

Claims 1-2, 4-7, 9-10, 13-15, 17-21 are currently pending. Claims 3, 8, 11, 12 and 16 are canceled for reasons discussed below. Support for new claim 21 is provided by Fig. 8a and Fig. 8b. No new matter has been added herewith.

Information Disclosure Statement

The list of references cited at page 3 of the Specification were said to not be a proper information disclosure statement. The first reference, JP2002-11096 was previously submitted with an Information Disclosure Statement. The second reference, JP 2002-102343 is submitted herewith as part of an Information Disclosure Statement.

The Information Disclosure Statement submitted May 9, 2006 was said to not comply with 37 C.F.R. § 1.98(a)(2), which requires a legible copy of each cited foreign patent document. Applicants note that reference at issue, an English, machine-translated abstract for JP 1984-228852 has been placed in the application file.

Objection to Drawings

Under 37 C.F.R. § 1.83(a)

The drawings were objected to allegedly because they did not show "the holder pivot support mechanism of Claim 2, Claim 5 and Claim 18. Applicants point out that the holder pivot support mechanism is illustrated in Fig. 5a and Fig. 5b, depicted as item **414**. Moreover the holder pivot support mechanism is referenced as being item **414** in the Specification as filed, for example at page 1, lines 20-21; and at page 12, lines 204. Thus, removal of the rejection is respectfully requested.

Under 37 C.F.R. § 1.84(p)(5)

The drawings were objected to because Fig. 4b included the reference number **417** and Fig. 10 included the reference number S11, but neither of these reference numbers were mentioned in the description. Fig. 4b has been amended with a Replacement Sheet that removes reference number **417**. On the other hand, the Specification is amended to refer to reference number S11.

The drawings were objected to because Figs. 7a and 7b are said on page 9, line 24-25 of the Specification to show liquid syringe 200 but the drawings depict cylinder member 210. To

be in accord with the drawings, the Specification has been amended to refer to cylinder member 210.

Also, page 15, line15 of the Specification says that the display will read "Syringe mounted" in step S2, but Fig. 10 says that the display will read "Syringe present". To be in agreement with the drawings, the Specification has been amended to state that the display will read "Syringe present".

Finally, page 15 lines 18-19 of the Specification says that the display will read "Syringe not mounted" in step S3, but Fig. 10 says the display will output "Syringe not present". To be in agreement with Fig. 10, the Specification has been amended to state that the display will read "Syringe not present".

In light of the amendments and remarks above, the rejection should be withdrawn.

Objection to the Specification

The Specification was objected to because of various typographical and grammatical informalities. Page 12, line 7, page 16, line 23, page 18, line 16-17 and page 19, line 6 of the Specification have been amended as suggested by the Examiner. The sentence at page 18, lines 9-10 was considered to be vague and unclear. Thus, Applicants have amended the Specification to delete the sentence.

Claim Objection under 37 C.F.R. § 1.75(c)

Claims 8, 11, 12 and 16 were objected to as being of improper dependent form for failing to further limit the subject matter of a previous claim. The claims are canceled, thereby removing the basis for the objection.

Rejection under 35 U.S.C. § 103(a)

Claims 1-5 and 7-20 were rejected as being unpatentable over US 2001/0021823 A1 to Nemoto in view of US Patent 5,714,232 to Reilly et al.

Claim 1 is amended to include the limitation of a cylinder adapter as previously recited in claim 3 and an additional limitation that clarifies the position of the mount-detecting means (sensor). Since the cylinder adapter comprises a contact-transfer member, as recited in amended claim 1, the mount-detecting means can detect the mount and dismount of the syringe through cylinder adapter.

Regarding the contact-transfer member, the examiner asserted that "The existence of this component of the adaptor is inherent because, without it, the mount-detecting means would only be able to detect if the adaptor was installed, [and] it would have no means of detecting the cylinder member of the syringe..." However, neither Nemoto nor Reilly disclose or teach such a contact-transfer member as recited in amended claim 1. If one of ordinary skill in the art were to adapt a sensor onto the injector of Nemoto, numerous possible configurations for detecting the syringe could be considered. For example, a configuration is possible in which the sensor detects the syringe directly without using a contact-transfer member. Therefore, it would not have been obvious to modify the adapter of cited document, and configure the injector with a contact-transfer member as recited in amended claim 1.

The Examiner states that, without contact-transfer member 419, the adaptor, when remaining mounted in the device-as in Fig. 9b- would continue to depress switch 131 as if it were a syringe of maximum size- as seen in Fig. 7b. However, a feature of the adaptor is that it is able to accommodate liquid syringes of varying sizes. Accordingly, the contact-transfer member, supported movably in throughhole 418 is able to detect liquid syringes of varying sizes and relay a signal via press switch 131 when a liquid syringe is present. None of the cited references provide any reason for the incorporation of this novel feature.

The foregoing distinction is a critical difference between the injector of present invention and those of the cited documents. As summarized in the Specification at page 3, line 18 through page 4, line 6, a disadvantage of liquid injectors of the prior art is that, occasionally a liquid syringe may fall off during the injection operation, requiring the operator to periodically confirm that the liquid syringe is in position. In contrast, an object of the present invention is to automatically detect attachment and detachment of a liquid syringe from a liquid injector. The sensor of present invention is placed at a position that becomes covered by the cylinder adaptor. In contrast, the injectors of cited documents do not comprise such a sensor. As such, based on the cited references, there would be no reason to modify an adaptor so that the sensor could detect the syringe, even if a cylinder adapter was used.

The Reilly et al. reference describes a system for transmitting syringe information from the syringe to an injector controller. However, Reilly et al. requires a specific encoding device such as a bar code or raised surfaces that identify attributes of the syringe such as the dimensions

of the syringe or information about the contents of the syringe. In the present application, there is no such encoding device. In contrast, the contact-transfer member merely detects the physical presence of a cylinder (e.g., a syringe) in the cylinder adaptor when it is attached to the liquid injector. Thus, the combination of the Nemoto and Reilly references do not anticipate the claims.

Claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over US 2001/0021823 A1 to Nemoto in view of US Patent 5,714,232 to Reilly et al. and in further view of Archibold. The Examiner states that, although Nemoto and Reilly do not disclose use of non-magnetic materials in the device adaptor, the Archibold reference does. However, Claim 6 is also not obvious in light of the remarks above pertaining to the Nemoto and Reilly references.

In view of the amendments to the claims and the remarks above, the claims are not obvious over Nemoto in view of Reilly or in further view of Archibold. The Applicants respectively request removal of the rejection.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, the Applicants are not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. The Applicants reserve the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that the Applicants have made any disclaimers or disavowals of any subject matter supported by the present application.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 9 April 2008

By: _____

Raymond D. Smith
Registration No. 55,634
Agent of Record
Customer No. 20995
(949) 760-0404

5125449
040808